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## MONGOLISM\* IN THE BANTU, INCLUDING A CASE REPORT

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Mongolism\* is rare in the African. The author was impressed by the fact that during 6 years of Native practice, divided between King Edward VIII Hospital, Durban (Natal), and the Health Centre Service of the Union Health Department—in Durban, in the Native reserves of Thaba 'Nchu (Orange Free State), and around King William's Town (Ciskei, Cape Province)—only one case has been seen or suspected. It is felt that the rarity in health centres is particularly significant because the work in the centres mentioned was predominantly paediatric, and the preventive, combined with curative, child health service covered a very large proportion of the healthy as well as the sick children. Like Lötter<sup>1</sup>, the author had failed to find a Bantu case of mongolism reported in the *South African Medical Journal*. The Tower Hospital (Fort Beaufort, Cape Province) is the largest mental institution for Natives and Coloured in South Africa, and the Physician Superintendent was unable to recall a case<sup>2</sup>. Bernstein<sup>3</sup> was unable to find any case of mongolism among 700 Natives in the Witrand Institution (Potchefstroom, Transvaal), and reports that the Superintendent, who has had experience with non-Europeans dating back to 1926, and medical officers of the institution were unable to recall a definite case.

The incidence of mongolism in England is estimated by Carter and MacCarthy<sup>4</sup> to be more than 1.6 per 1,000 maternities (mothers giving birth to live and still-born children); more than 1% of maternities to mothers over the age of 40 result in a mongol. Book and Reed<sup>5</sup> investigated mongolism in Sweden, and estimate that the true incidence is probably close to 1 in 500 newborn. Van der Scheer<sup>6</sup> found in Holland that there were 500 cases of mongolism in a total general population of 8 millions. Beidleman<sup>7</sup>, in Boston, USA, found a surprisingly uniform rate of 3.4 mongols per thousand

babies born in the lying-in hospital during a period of 14 years.

The paucity of Native cases in South Africa is astonishing. With a Bantu population in the Union of close to 8 millions, over 250,000† Bantu births per annum, and common experience of Native women who have had more than 10 confinements, one would expect, if the incidence was anything approaching that in the other countries quoted, at least 300 Bantu mongols to be born here every year. Yet Lötter's case<sup>1</sup>, together with the 4 other cases (known to Kluge) that he mentions, and the case described below, brings the total of known Bantu cases in the Union of South Africa to 6.

Weinberg<sup>9</sup> suggests that mongolian frailty may partly account for the rarity of these cases. Record and Smith<sup>10</sup> found that less than half the mongols born in Birmingham survive the 1st year of life, and that only  $\frac{2}{3}$ ths are alive at 5 years. Infant mortality among the South African Bantu is known to be high. It is hardly likely, however, that this is adequate explanation. Kluge's efforts (quoted by Lötter<sup>1</sup>) and the experience in institutions in South Africa, as mentioned above, are evidence against the supposition that doctors in South Africa are slow in recognizing or writing up cases of mongolism.

It is of interest to note that Thompson<sup>11</sup> considers that approximately 1% of all mongols in the USA are coloured, whereas the ratio of coloured to white population is 9%. Carothers, and Tooth<sup>12</sup> believe that mongolism does not occur among Africans. Jelliffe<sup>13</sup> did not meet a single case in his long experience of paediatrics in Nigeria. On the other hand, Luder and Musoke<sup>14</sup> gave preliminary notice of reporting 6 undoubted cases among the indigenous Baganda and Lango tribes in Kampala, Uganda, where the possibility of any admixture of non-Negro strains can be discounted.

† In the 1946 census of the Union of South Africa<sup>8</sup>, the number of Bantu children aged 1 year, 2 years and 3 years was 205,181, 226,483 and 234,488 respectively. Allowing for infant mortality, the figure of 250,000 births per annum is probably an underestimate.

\* In an editorial in this *Journal* (1951, 25, 761) it is pointed out that the name 'mongolism' is inaccurate and unfortunate, and an appeal is made for another name for the condition.

The only factor known to be related to the aetiology and incidence of mongolism, is the mother's age, the apparent relation between birth order and mongolism being due to the association of maternal age and birth order.<sup>15, 16</sup> Jelliffe<sup>13</sup> speaks of factors which may be acquired from non-African—that is Caucasian and Asian—sources, but appeals for further work on the racial incidence, which may provide clues on aetiology. Smith and Record<sup>18</sup> believe that the maternal environment is important in the aetiology of mongolism.

#### CASE REPORT

A Native (Xosa) female child, born in 1948 in Amatole Basin, was brought to the Health Centre there in January 1952 and, by request, in January 1953. The mother complained at the first visit that the child was still not walking or talking. The child's facial expressions and behaviour were typical of mongolism, and, as shown in the photograph taken in 1953, the facies and posture are classical.

Amatole Basin is a valley surrounded by hills, and enterable by one road only (past Fort Cox), 36 miles north-west of King William's Town. It was a Native stronghold during the kaffir wars. There was no evidence that the patient might be of mixed blood.

The child was the 8th pregnancy of a Native woman born during the Boer War (about 1900). All the children had been by the same father. The 2nd child died before it was 1 month of age, the 4th died at about 10 months, and the 5th and 6th in childhood. The remaining 4 children were alive and well.

With the exception of the delay in walking and talking the mother had no complaint about the child's health, during the past or present. The child had apparently suffered no major illnesses.

When seen in 1953, the child was obviously a dwarf, with the typical mongolian smile, active, grimacing, phonating but not producing any words. When given her bonnet she put it on her head. The mother stated that the child was able to feed herself. Vision and hearing were apparently normal.

Her recumbent length, vertex to heel, was 30½ inches, and weight 19 lb. 6 oz. There was marked hypotonicity of neck, spine and limbs, and while lying on her back her heels were easily placed behind her ears. The anterior fontanelle was still patent, the lateral diameter being about one inch. The eyes were widely spaced and rather small, the palpebral fissure sloped downward and inwards, and there was marked epicanthus. (Epicanthus is not infrequently seen in the healthy Xosa). She had 20 teeth, the uppers being somewhat crowded, with angulation of the anterior incisors so that the acute angle pointed inwards. A slight degree of caries was present.

The pinnae of her ears were well developed, and, with the exception of a prominent longitudinal fissure up to the mid-base of the middle finger, so were the palmar creases. There was, however, considerable in-curving of the little fingers. The cleft between the big and 2nd toes did not seem, in this patient, to exceed what was often seen in other Bantu patients.

Clinical examination of heart, lungs and abdomen revealed no abnormality; the liver edge was just palpable.

As was frequently found in other patients at the time, there were signs of considerable malnutrition, viz. sparse depigmented hair, dry thick hyperpigmented skin with permanent *cutis anserina* and some folliculosis; the mucous membrane of the margins of the tongue was atrophic, while there was marked hypertrophy of the follicles at the tip of the tongue.

Blood investigations were not carried out.



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## SUMMARY AND CONCLUSIONS

1. A case of mongolian idiocy in a Bantu child is described.

2. The rarity of this condition in the South African Native is emphasized and reasons are discussed. The literature in this connection is reviewed.

3. This rarity is probably not accounted for by a high mortality rate. Racial, environmental, and dietetic factors in the aetiology of mongolism cannot yet be considered to have been excluded.

My thanks are due to the Secretary for Health for permission to publish this article, and to the Superintendents of Witrand Institution, of Oranje Hospital, and of Tower Hospital, for their co-operation.

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# South African Medical Journal

## Suid-Afrikaanse Tydskrif vir Geneeskunde

### EDITORIAL

#### HIBERNATION

The recent development of hypothermia for surgical purposes and the use of pharmacological agents to achieve this purpose have led to confusion regarding the difference between hypothermia and hibernation.<sup>1</sup> One difficulty arises from the use of the term hibernation in a general sense to indicate the reduced activity of many groups of animals that takes place in winter. Many animals spend part of the winter in a dormant state, but there is no marked fall in body temperature or metabolic rate.

Exposure of any mammal to a sufficiently low temperature induces increased muscular activity, shivering, and increased metabolic rate; if exposure is severe and prolonged cooling and death will occur. The hibernating mammal can, however, awake from the deeply hibernating state without the application of heat from outside sources. In fact once the process of arousal is started by an appropriately powerful stimulus a reaction occurs in which heat is rapidly produced and full awakening results in two or more hours.

In preparing for the period of hibernation some species of animals store energy in the body as body fat, others accumulate stocks of food in their burrows. There are also differences between species with regard to the refusal of food; for example in the laboratory starvation actually hastens hibernation in ground squirrels and woodchucks. The relation of adipose tissue to hibernation needs further investigation. For instance the function of brown fat is not properly understood. This type of adipose tissue occurs in many parts of the body; the accumulation between the scapulae has been called the hibernating gland, which is an unsatisfactory and misleading term. The brown fat is a specialised adipose tissue; thus its storage and utilization are influenced by its nerve supply, and it is a more active type of tissue than white fat. Its occurrence is not limited to animals that hibernate.

When mammals enter the hibernating state the endocrine glands generally undergo involution; but the glands are not apparently of major importance in bringing about the onset of hibernation. It is still not known

### VAN DIE REDAKSIE

#### DIE WINTERSLAAP

Die onlangse ontwikkeling van hipotermie vir snykundige doeleindes en die gebruik van farmakologiese middels om hierdie doel te bereik het aanleiding gegee tot verwarring aangaande die (fisiologiese) verskil tussen hipotermie en winterslaap.<sup>1</sup> Een van die moeilikhede ontstaan weens die algemene gebruik van die term 'winterslaap' om die verminderde aktiwiteit van baie diersoorte gedurende die winter te beskryf. Baie diere bring 'n deel van die winter rustend deur, maar daar is geen aansienlike daling in liggaamstemperatuur of metabolisme-tempo nie.

Blootstelling aan 'n temperatuur wat koud genoeg is, veroorsaak by enige soogdier vermeerderde spieraktiwiteit, bewing en 'n verhoogde metabolisme-tempo; strawwe en langdurige blootstelling sal die dier laat verkluim en doodgaan. Die oorwinterende soogdier kan egter sonder die aplikasie van uitwendige hitte uit sy diepe winterslaap ontwaak. Inderdaad, as die ontwakingsproses eers deur 'n sterk genoeg prikkel begin is, is daar 'n reaksie waardeur hitte vinnig verwerk word en volle ontwaking volg binne twee uur of langer.

In voorbereiding op die tydperk van winterslaap vergader sommige soorte diere energie in die vorm van liggaamsvet en ander bêre weer 'n voorraad van voedsel in hul lêplekke. Ook is daar verskille onder diersoorte wat die weier van kos betref; uithongering in die laboratorium verhaas bv. die winterslaap by waaierstert-meerkatte en by die woodchuck. Verdere navorsing is nodig om vas te stel watter rol vetweefsel in winterslaap speel. Die funksie van bruin vet word byvoorbeeld nog nie goed verstaan nie. Hierdie soort vetweefsel kom voor in baie dele van die liggaam; die versameling tussen die skouerblaaie word soms die 'hibernasieklier' genoem—'n onbevredigende en misleidende term. Die bruin vet is gespesialiseerde vetweefsel; die opgaar en gebruik daarvan word beheer deur sy senuwees en dis 'n meer aktiewe soort weefsel as wit vet. Dit kom nie alleenlik by diere wat in die winter 'slaap' voor nie.

Wanneer soogdiere hulle winterslaap begin, krimp die buislose kliere gewoonlik in, maar dit blyk dat hierdie kliere nie 'n belangrike rol speel in die aanvang van die winterslaap nie. Dit is nog nie bekend of die vertraagde metabolisme 'n oorsaak, of die gevolg, van die rustende winterstaat is nie. Wat buislose klierwerking betref, is dit wel bewys dat die afneem in die aktiwiteit van die skildklier en die byniere, waarop



whether depression of metabolism is a cause or the result of the hibernating state. As regards endocrine function the decline in thyroid and adrenal activity, emphasized by some workers, has been shown to take place weeks or months before the time of hibernation.<sup>2</sup> Similarly it is not yet established which changes in the endocrine glands are the cause and which the effect of the hibernating state. Inactivity of the endocrines involved in metabolism is to be expected; however, they may be important in setting the stage for the final act.

During hibernation all hibernators, with the exception of bats, curl into a tight ball to reduce heat loss. Within a limited range the body temperature follows the environmental temperature, but generally lagging behind it. The heart rate is remarkably slow, and auriculo-ventricular dissociation may occur, which is of interest in view of the cardiac abnormalities that may occur during induced hypothermia. The blood pressure is presumed to be low. The function of the kidneys in deep hibernation is a subject for investigation, and many other physiological modifications occurring in hibernators still require elucidation.

The duration of hibernation varies from one species to another; in some animals it may continue for several weeks at a time, in others there may be periodic awakening, especially at the beginning and the end of hibernation. Some species of hibernators are more readily roused by external stimuli than others. It is not known what causes periodic awakening under natural conditions; it may be the reduction of some critical nutrient that causes the awakening.<sup>1</sup> It is obvious that delicate methods of experimentation will be required to elucidate this question and all the many other problems the fascinating phenomenon of hibernation.

Of the various theories of hibernation that have been put forward<sup>1</sup> mention will only be made of the concept that the central nervous system is the basic controlling mechanism, but further evidence will be needed before the exact role of the hypothalamic and other centres can be defined. Other factors also, including the endocrine glands, must probably be included in the general theory of hibernation.

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2. Deane, H. W. and Lyman, C. P. (1954): *Endocrinology*, **55**, 300.

sommige navorsers sterk nadruk lê, weke of selfs maande vóór die tyd van die winterslaap al plaasvind.<sup>2</sup> Ook is dit nog nie vasgestel watter van die veranderings in die buislose kliere die oorsake, en watter die gevolg van oorwintering is nie. Dit is te verwagte dat die werking van die buislose kliere wat by metabolisme betrokke is tot stilstand sal kom; maar hulle kan egter belangrik wees by die voorbereiding van die liggaam vir die finale fase.

Gedurende die winterslaap krul alle diere wat daaraan onderhewig is, behalwe vlermuise, in 'n stywe balletjie op om sodoende minder hitte te verloor. Binne perke volg die liggaamstemperatuur dié van die onmiddellike omgewing, maar bly gewoonlik ietwat laer. Die hart klop merkwaardig stadig en afsluiting tussen die voor-kamers en die kamers kom soms voor. Dit is interessant om hierop te let want abnormaliteite in die hart mag voorkom gedurende kunsmatige verlaging van die liggaamstemperatuur. Dit word aangeneem dat die bloeddruk laag is. Die funksie van die niere gedurende diepe winterslaap is 'n onderwerp wat verdere ondersoek verg, en baie ander fisiologiese wysigings wat by winterslapers voorkom moet nog verder verduidelik word.

Die duur van die winterslaap verskil van een diersoort na die ander; by sommige diere mag dit ononderbroke oor verskeie weke strek terwyl ander soorte weer van tyd tot tyd wakker word, veral teen die begin en einde van die oorwinteringperiode. Sommige soorte word makliker as ander opgewek deur uitwendige prikkelings. Ons weet nie waardeur periodieke ontwaking onder natuurlike omstandighede veroorsaak word nie—moontlik deur die vermindering van 'n kritieke voedingstof.<sup>1</sup> Dit is duidelik dat uiters delikate proefmetodes nodig sal wees om hierdie saak te verduidelik en om al die veelvuldige probleme van hierdie boeiende verskynsel op te los.

Uit die verskillende bestaande stellings aangaande winterslaap,<sup>1</sup> vermeld ons slegs die teorie dat die basiese kontrole-meganismus in die sentrale senuweestelsel gevestig is. Verdere bewyse is egter nodig voordat die juiste rol van die hipotalamus en ander sentrums bepaal kan word. Ook moet ander faktore, waaronder die werking van die buislose kliere, waarskynlik by die algemene teorie van winterslaap in aanmerking geneem word.

1. Lyman, C. P. en Chatfield, P. O. (1955): *Physiol. Rev.*, **35**, 403.
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## UNION DEPARTMENT OF HEALTH BULLETIN

*Union Department of Health Bulletin.* Report for the 7 days ended 20 October 1955.

*Plague, Smallpox, Typhus Fever:* Nil.

*Epidemic Diseases in Other Countries.*

*Plague:* Nil.

*Cholera in Dacca (Pakistan).*

*Smallpox in Rangoon (Burma); Allahabad, Bombay (India); Dacca (Pakistan); Nhatrang (Viêt-Nam); Dar es Salaam (Tanganyika).*

*Typhus Fever in Kabul (Afghanistan); Cairo (Egypt).*

## ELECTRIC COMA TREATMENT OF MENTAL DISORDER\*

## A FURTHER REPORT

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In a previous communication<sup>1</sup> our preliminary observations on electric coma treatment of mental disorder were described and tentatively discussed. We then gave an account of our early efforts with sub-convulsive stimulation, which was induced electrically by using an apparatus specially designed to generate unidirectional (pulsed) current for passage through the brain. It was then suggested that this method of treatment, which was essentially a different type of treatment from electro-shock, had very definite advantages, *firstly*, because it altered and extended the therapeutic effect of shock treatment and, *secondly*, because it had a greater value in the treatment of certain conditions, e.g. the anxiety and tension states etc. What was less clearly stated is the difference—theoretical and practical—between sub-convulsive cerebral stimulation (in the forms of *purely non-convulsive stimulation* and *electric coma*) on the one hand, and electro-shock on the other; with reference to the various methods of approach, techniques, and the types of apparatus in use. It is to a consideration of these problems that we now propose to turn, as well as to an attempt at *provisional* assessment of the place of sub-convulsive cerebral stimulation in the treatment of mental disorder and allied conditions.

## THEORETICAL CONSIDERATIONS

*Electroshock*

Since the introduction by Cerletti and Bini<sup>2</sup> of a method of cerebral electric stimulation which aimed at the production of therapeutic convulsive seizures, this method rapidly spread throughout the psychiatric world. The type of current which is used for this method of treatment is controlled, sine wave, alternating current.

It was soon found that certain conditions, e.g. the affective psychoses rather than the schizophrenic states, responded most favourably to such treatment, although certain mixed schizo-affective states, especially those with catatonic elements, also seemed to benefit. On a psychophysiological level it was observed<sup>3, 4</sup> that the arousal or enhancing of the active defensive operations of the patient appeared to be the most decisive effect of electro-shock therapy, and that it is probably for this reason that electro-shock is helpful in those conditions in which the defensive operations of the patient are at a low ebb, ineffective or exhausted, such as in the depressions and in other severely regressive psychotic states.

Conversely, electro-shock treatment is probably for the same reason ineffective or disturbing in those con-

ditions in which the defensive operations are already too alerted, constituting thereby an obstacle to treatment and recovery—such as in the anxiety and tension states, in some of the obsessive-compulsive states and in the paranoid states. These states, as we know only too well, respond on the whole poorly to electro-shock.

Certain other drawbacks of the standard electro-shock method of treatment also soon became evident, especially with reference to the disturbing side-effects which were produced. Predominant among these undesirable side effects were a secondary build-up of anxiety on the part of the patient, especially in those conditions where agitation formed an appreciable element of the basic condition; confusional states following electro-shock; and the notorious development of memory disturbances.

Because of these findings research workers and therapists started looking for methods of treatment which would obviate or circumvent the undesirable side-effects of shock treatment.

*Sub-convulsive cerebral electric stimulation*

Several workers<sup>5</sup> now introduced unidirectional (pulsed) currents in order to produce therapeutic electro-narcotic effects. This type of treatment is a brief-stimulus treatment because pulses of exceedingly short duration, anything from  $\frac{1}{2}$  to 20 microseconds, are passed through the brain. It must be noted, however, that there are various kinds of pulsating currents—depending on the particular type of wave form used, e.g. rectified sine waves, which may be in the form of half-wave, full wave or filtered rectification, square waves, saw-tooth waves or the amplitude-modulation type of wave. These different types of wave forms are employed in the different machines on the market today, e.g. rectified waves are employed in the Malvern stimulator and in some of the Ectron stimulators; square waves in the Commutator-interrupter, described earlier this year by Montagu,<sup>6</sup> and in the Pulsacon unit; and amplitude modulation of these basic wave forms in the Reiter stimulators, which are in use mainly in America. Any one of these machines can therefore be used (even machines working on alternating current have been used in subconvulsive stimulation), but the best machine must satisfy the following criteria: (1) It must be able to produce the maximum stimulating, electronarcotic and therapeutic effects in the safest possible way, and (2) it must have the widest range of clinical possibilities.

Strauss<sup>7</sup> believes that a pulse-wave current allowing of 4 variables—*pulse width, repetition frequency, peak voltage and milliamperage*—provides the best and safest method of inducing and maintaining coma. The Pulsacon unit—after the specifications of Strauss and MacPhail—is an apparatus which fulfils these requirements, and this was the unit used in our work. With this

\* A paper presented at the South African Medical Congress, Pretoria, October 1955.

machine coma can be induced instantaneously and maintained safely for several minutes by varying the abovenamed 4 variables (this happens automatically on turning down the Energy Factor control after the machine had been set at its standard loading dose) as the treatment proceeds and according to the clinical response of the patient while under treatment. The treatment can be given under pentothal anaesthesia and a muscle relaxant.

A note of warning must be sounded here. With the Pulsacon machine we found it necessary to make several modifications. These modifications were, however, of a mechanical nature only and they make no difference to the effective current. In spite of this warning the Pulsacon machine remains the machine of choice because it satisfies both the abovenamed essential criteria, i.e. it is able to induce both electric coma treatment and purely non-convulsive cerebral stimulation under circumstances which are well-nigh perfectly safe, provided the usual precautions are taken regarding the selection and preparation of suitable patients.

Clinically this method of treatment extended the effects of electro-shock if used as an additional method of treatment together with shock treatment—in those conditions for which shock treatment remains the treatment of choice, e.g. the depressive states, the simple involuntary reactions and the grossly regressive schizophrenic states. For instance it relieved or prevented confusional states and memory disturbances following upon shock treatment, etc. Furthermore, sub-convulsive electric stimulation was found to be superior to shock treatment in the treatment of anxiety and tension states with or without obsessive-compulsive states and insomnia, and in the treatment of several other conditions, as we shall see later.

On a psychophysiological level, and in contrast to electro-shock treatment, which tends to enhance the defensive mechanisms, sub-convulsive electric stimulation lowers the level of the defences; anxiety is relieved, obsessions and compulsions lose their urgent qualities, and in the over-reactive patient *rappport* becomes enhanced, tranquillity is regained and his rigid and frantic defences are softened and even lowered to the point of depression.

It goes without saying, therefore, that a dynamic relationship should exist between patient and therapist. In his decision about the nature and quantity of treatment, the therapist should be led by the patient's response, especially with reference to changes in the basic mood of his condition and the state of his defensive mechanisms. It will always be necessary to combine and recombine various physical and psychotherapeutic approaches in order to steer the patient skilfully past the danger points of anxiety and depression by giving preference to sub-convulsive treatment when anxiety is predominant, and to convulsive treatment when depression is predominant.

This, then, brings us to a consideration of our clinical results over the past 2 years with the two variants of subconvulsive stimulation, i.e. electric coma treatment and purely non-convulsive cerebral stimulation. It must, however, again be stressed that our results are presented

in the form of striking impressions rather than statistically significant findings.

#### CLINICAL RESULTS

Through the use of the Pulsacon machine we have been in a position to give both variants of sub-convulsive cerebral stimulation, viz. (1) purely non-convulsive cerebral stimulation, and (2) electric coma treatment, also called combined tonic non-convulsive stimulation.

##### (A) Purely non-convulsive cerebral stimulation

*Technique.* This type of treatment can be given with the Pulsacon unit by passing a current of 2 ma. (average) through the brain.

This is done by first setting the machine at its standard loading dose: Set Energy Factor (hereafter E.F.) control at 9 and the Variac Control (V.C.) at 1,400 volts. When this is done 4 ma. should register on the milliammeter. Manipulate the E.F. control only now to 5. It will be found that an effective current of 2 ma. now registers on the milliammeter. The machine is now set and loaded, ready for treatment.

It must be borne in mind that pulsating current given at a level of 2 ma. is unpleasant and somewhat painful to take unless it is preceded, as in electric coma treatment, by a period of stimulation at a higher level. For cerebral stimulation narcosis must therefore first be induced. This can be done by administering pentothal as long as stimulation is continued, or by giving an electro-shock first and following it up with stimulation.

The current described above (2 ma.) is now switched on—after the electrodes have been placed in biparietal positions just above the ears in a previously prepared patient, i.e. a patient who has not eaten for about 2 hours and who has been given 1/100 gr. of atropine an hour before treatment. Cerebral stimulation is now given for 3-7 minutes. The patient will wake up to full consciousness as soon as the narcotic effect of the pentothal wears off.

We have used this type of treatment, i.e. purely non-convulsive cerebral stimulation, in the following 4 groups of conditions:

1. *The treatment of anxiety states and confusion* resulting from previous electro-shock treatment. We have found that non-convulsive cerebral stimulation acts like a charm in the prevention and/or removal of confusional and anxiety states when given as an integral part of shock treatment.

2. *The treatment of memory disturbances* resulting from previous shock treatment. Our most striking finding in this connection, after more than a thousand treatments, is that there is no appreciable disturbance of memory in patients who received courses of 15-20 shock treatments. We have now developed a technique by which all our shock treatments are rounded off by a short period of non-convulsive cerebral stimulation. (1 or 2 minutes or longer, depending on the degree of depression present in the basic condition which is treated). The so familiar dull, obtuse, amnesic post-shock patient is no longer seen in our wards. These findings, referred to above, constitute interesting confirmation of the findings reported earlier by Alexander<sup>3</sup> and others.

3. *Cerebral stimulation was used as an antidote-equivalent* to the choline-succinic-ester derivatives (Scoline, Brevdil M and Brevdil E) where these relaxants are used to modify or prevent the contractions of electro-shock. We know that every one of these relaxants



has its advocates. Monro,<sup>8</sup> for instance, writes: 'Our general conclusion, at present, is that Scoline is the most satisfactory short-acting relaxant of these three'. Danik<sup>9</sup> states: 'Because of the rapid onset, brief duration and rapid termination of neuro-muscular blocking action, Brevdil M seems to be ideal as a muscle relaxant in E.C.T.' And according to McNeill,<sup>10</sup> 'Brevdil E could be confidently used as a relaxant because it is safe and rapid.'

In our own experience there is very little, if any, clinical difference between Scoline and Brevdil M. We found Brevdil E particularly satisfactory because of the full relaxation that can be achieved through its use and because of the extremely brief duration of its action. With Munro<sup>8</sup> we found, however, that 'the relaxant effect of Brevdil E is inconsistent both as between different individuals and in the same individual at different times.' It must also be borne in mind that Brevdil E is relatively expensive and that unavoidable wastage occurs because the solution of Brevdil E loses its activity within 5 minutes of preparation.

In the light of the above it is probably fair to say that Scoline and Brevdil M are the relaxants of choice in shock treatment. One important complication remains, however (and this is also true for Brevdil E), namely, the possibility of occasional prolongation of apnoea beyond the usual 2-4 minutes. In our experience with Scoline and Brevdil M we found that apnoea lasted for 1-3 minutes *usually* and up to 4 or 5 minutes *occasionally*. In one, at the time extremely worrying, case apnoea lasted for 20 minutes after the administration of an average dose of Scoline. At this stage we decided to administer cerebral stimulation. This was the first case in which we used cerebral stimulation for this purpose. The result was so striking and so dramatic—on switching on the current the patient gave one big gasp and started breathing—that we are now using cerebral stimulation as a routine antidote-equivalent to Scoline and Brevdil M in shock treatment. Most of our cases start breathing within 1 minute and no single case of apnoea (in more than 300 treatments) was noticed to last longer than 2 minutes.

One other consideration must be stressed here: By using cerebral stimulation as a routine with a relaxant in shock treatment, we attain 3 important goals in one; i.e. we make the use of a relaxant as safe and foolproof as possible, we prevent the development of post-shock anxiety and confusion, and we protect the patient against worrying disturbances of memory.

4. *The use of cerebral stimulation for the electric termination of insulin coma.* Montagu<sup>11</sup> recently reported the successful termination of insulin hypoglycaemic coma treatment in 6 schizophrenic men and 8 women by electric stimulation. We tried this method of termination in 20 cases (100 treatments).

Cerebral stimulation was administered for 5-7 minutes at an average current level of 2 ma. through electrodes placed  $\frac{1}{2}$  inch above each ear to patients in coma for periods varying from 20 minutes to 1 hour. Our results can be summarized briefly as follows:

(a) In every attempt at electric termination the degree of coma of the patient was greatly diminished.

(b) Fifty per cent of our cases responded by regaining

full consciousness so that they could sit up and drink the usual amount of sugar water.

(c) The rest of our cases responded by regaining near-consciousness only. They were not able to drink sugar water and their comas had to be terminated by tube feed.

(d) In one case of delayed recovery and in one case of so-called 'irreversible' coma, these states were terminated by means of cerebral stimulation after the usual emergency measures had failed.

(e) This method of termination of insulin coma cannot yet be considered a satisfactory and reliable routine method. It is, however, extremely useful in the cases in which it does work, and its great value probably lies in its effectiveness as a stand-by in cases of delayed recovery and 'irreversible' coma.

#### (B) *Electric coma treatment, also called combined tonic non-convulsive stimulation*

*Technique.* This type of treatment can be given with the Pulsacon unit by first passing a current which is strong enough to produce coma instantaneously through the brain for 1 minute and then by continuing the treatment for 3-7 minutes on the level of cerebral stimulation, i.e. on the level of 2 ma.

This is done by first setting the machine at its standard loading dose, i.e. E.F. control at 9 and V.C. at 1,400 volts. When this is done 4 ma. should register on the milliammeter. Manipulate the E.F. control only now to 5. Place the electrodes in a biparietal position just above the ears. Give pentothal and Scoline—if desired—and switch on the current. Manipulate the E.F. control glissando-wise over a period of 4-5 seconds to 10. Leave the E.F. at the level of 10 for 30 seconds and then turn it down to 8. Leave it at 8 for another 30 seconds and then turn it down to 5 or 4, depending on the patient's level for easy respiration. Leave the E.F. now at this level—5 or 4—for 3-7 minutes, or until the patient starts making voluntary movements. Switch the current off.

We have used this type of treatment, i.e. electric coma treatment, in the following 4 groups of conditions:

1. *The whole group of anxiety and tension states*, with or without psychasthenia and insomnia, and the secondary states of anxiety and agitation so often found in early schizophrenia and in the paranoid conditions. These conditions of tension and anxiety are, as we know only too well, not easily amenable to psychotherapy alone and they are usually not relieved, but often aggravated, by shock treatment. Alexander<sup>3</sup> and Hirschfeld<sup>12</sup> both found that electric coma treatment had a striking and dramatic effect on these anxiety and tension states. This has been our experience too. In our treatment of 110 patients (74 male and 36 female patients, given about 1,200 treatments altogether), all of whom suffered from some form of gross anxiety or tension, we found that electric coma treatment greatly facilitated the breaking of the vicious tension cycle, thus relieving the anxiety and agitation. The treatment also invariably made the patients sleep better—so much so that we have almost come to look upon electric coma treatment as a specific method of treatment for most cases of insomnia.

2. *The treatment of drug addiction and alcoholism.* We treated 4 cases of severe drug addiction (2 morphia and 2 pethidine) as follows:

(a) The patients were put on a programme of progressive elimination of the drugs over a period of 8 days.



(b) A balanced diet with additional vitamins was prescribed.

(c) Largactil, 50 mg. *t.i.d.* by mouth, was prescribed.

(d) The use of a sedative—Sodium Amytal or paraldehyde draught—was made optional by leaving the sedative at the bedside at night after the patients were told that they could take the drug if they felt they could not do without it, but that it was preferable that they should leave it.

(e) A course of electric coma treatment was given once daily for the first 2 days, then on alternate days for 2 more treatments and then 3 times a week.

(f) The above treatment was regularly followed up by psychotherapy.

Because we only treated this limited number of cases along these lines, our results can certainly make no claim to statistical significance. They were, however, striking enough to warrant inclusion in this account for two reasons, (1) the dramatic results achieved, compared to the larger number of patients we had treated previously without using electric coma treatment, and (2) because by a strange coincidence 3 of these 4 patients were medical doctors, 2 of them specialist surgeons. They had all been taken off their drugs before on a more or less similar regime, including Largactil and shock treatment in 3 cases, so that the electric coma treatment was the only variable. They all emphatically stated that the process of coming off the drugs was easier than before. They felt relaxed and slept well from the second treatment onwards, and they showed no appreciable withdrawal symptoms in spite of the relatively steep gradient on which the drugs were withheld. The doctors felt that the electric coma treatment made a significant difference to their condition—two of them even asked to have the treatment more often because it made them feel relaxed.

In 8 alcoholics, who also showed a gross anxiety state—for which they were primarily admitted—a more or less similar line of treatment was adopted with reasonably good results.

3. *Psychosomatic conditions.* Many psychosomatic conditions related to autonomic imbalance and representing somatization of anxiety have shown favourable response to this method of treatment, e.g. palpitation, headache, precordial pains, irritable colon, 'butterfly stomach', choking sensations of the throat etc.<sup>12</sup> Our own experience in this field has been limited, mainly because of the nature of our admissions. We have had encouraging results from the treatment of a number of psychosomatic conditions which showed no response to the standard methods of approach; but in most of our cases the psychosomatic conditions were bound up with other abnormal mental states, so that we have not seen enough of the response in 'pure' cases. We do feel, however, that this line of treatment must be stressed in order to stimulate further research and experimentation. Hirschfeld<sup>12</sup> expressed the view that electro-stimulation will probably in due course find its widest application in internal medicine, rather than in psychiatry. (Compare in this connection also the successful treatment reported by Robie<sup>13</sup> in cases of barbiturate poisoning; by Hirschfeld<sup>12</sup> in respiratory arrest and asphyxia of the new-born; and by Peskin<sup>14</sup> in control of auricular flutter.)

4. *The treatment of psychotic conditions* as such has been less successful with electric coma treatment. Electric coma is in the first instance excluded in all cases and conditions where psychotic depression is marked. (Here shock treatment remains without any doubt the treatment

of choice.) Secondly, although some cases of manic-depressive psychosis (manic) respond better to electric coma treatment than to shock treatment, the reverse is true in others. And as regards the treatment of the schizophrenic states, it has been our impression, with Alexander,<sup>3</sup> that both electro-shock and electric coma treatment are in this respect inferior to insulin.

#### SUMMARY

The theoretical and clinical differences between shock treatment and sub-convulsive cerebral electric treatment (in the form of purely non-convulsive cerebral stimulation, and electric coma treatment) are discussed with special reference to the various methods of approach, techniques and the types of apparatus in use.

An attempt is also made at provisional assessment of the place of sub-convulsive cerebral electric stimulation in the treatment of mental disorder and allied conditions. On the basis of our experience during the past 2 years it is suggested:

A. *That purely non-convulsive cerebral stimulation* is probably useful in the treatment of the following 4 groups of conditions:

1. The treatment of secondary anxiety states and confusion resulting from electro-shock treatment.

2. The treatment of memory disturbances resulting from shock treatment.

3. As an antidote-equivalent to Scoline or Brevitol M where these relaxants are used to modify or prevent the contractions in electro-shock.

4. For the electrical termination of insulin coma.

B. *That electric coma treatment* is probably useful in the treatment of the following 4 groups of conditions:

1. The treatment of the whole group of anxiety and tension states, including the primary neurotic anxieties and tensions, and the secondary states of anxiety and agitation often found in early schizophrenia and in the paranoid conditions.

2. The treatment of drug addiction and alcoholism.

3. The treatment of certain psychosomatic conditions.

4. The treatment of the psychotic states as such. Here the results were no better than with shock treatment or insulin.

*It would appear therefore, that sub-convulsive cerebral electric stimulation is, next to shock treatment, an invaluable additional method of treatment for several abnormal mental states and allied conditions.*

I wish to thank Dr. D. S. Huskisson, Physician-Superintendent, Valkenberg Hospital, for his wise guidance and his interest, and Dr. C. G. A. Simonsz, Assistant Physician-Superintendent, for his critical and stimulating assistance, especially with reference to our work in connection with the use of muscle relaxants. I am also greatly indebted to Mr. J. H. Abel of the Trigonometrical Services, for his assistance with certain technical aspects of this study, and to those colleagues who assisted in or administered the treatment to the female patients.

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## THE CASE OF THE VANISHING TOES

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Usually, when a patient presents with the loss of one or more toes the diagnosis is not difficult. If the clinical picture is obscure then the appropriate special investigations provide the answer. The case now reported gave an unusual story, which was to some extent verified by a previous admission to this hospital; other findings did not help to establish a diagnosis.

### CASE REPORT

G.U., a 35-year-old Coloured male, was admitted to the Somerset Hospital on 7 January 1955 in a neglected and malnourished condition, for investigation of the loss of several toes. The patient stated that 5 years ago the affected toes shrivelled up over a period of a few months, and that there had been no further change since then. There was no history of trauma or of exposure to cold, and the process was painless. He was admitted to this hospital at that time and, though the notes of that admission are lost, Dr. Jack Prisman had seen him then and remembers the appearance of his feet; Dr. Prisman considers there have been no gross changes since then.

The right arm was missing from the level of the shoulder joint; the patient said that the loss had occurred in childhood, when he was mauled by a tiger in a circus.

The following lesions were seen in the feet (Figs. 1 and 2): On the right, the great toe was about one-third of its normal length; on its dorsum grew a rudimentary and distorted toe-nail. The 2nd and 3rd toes were normal in length. All that remained of the 4th toe was a soft, smooth fleshy bud. The 5th toe had an atrophic nail but was normal in length. On the left foot the 1st, 2nd and 3rd toes were normal in length, but the 4th and 5th were reduced to rounded buds perched on the dorsum of the distal edge of the foot. The toes on both feet that still made contact with the ground showed a varying degree of hyperkeratosis; on the left big toe this was florid, and extended onto the medial surface of the toe.

There were no scars on the toes, nor were they cold or tender. Hair grew normally close to the edges of the buds. The dorsalis pedis and posterior tibial pulses were palpable. All forms of sensation in the legs were intact, motor power and co-ordination were adequate, and the reflexes were normal. There was no thickening of superficial nerves. There were no skin lesions on other parts of the body, save for hyperkeratosis of the soles of



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the feet (the patient usually walks barefoot) and of the exposed parts of the forearms and the dorsa of the feet.

The only other general sign noted was a firm non-tender enlargement of the liver to 2 finger-breadths below the tip of the right 9th costal cartilage. X-rays of the chest and routine urine and blood analyses were negative.

The whole skeletal system was X-rayed; the only abnormalities found were in the feet (Fig. 3). The X-ray shows that the underlying bony changes are greater than suggested by the external appearances. Of the apparently normal toes, certainly the 2nd and 5th right toes show erosion of the distal phalanges. Only a spicule of the base of the right big toe, and less than half the proximal

disease is not now present, the history was not that of gangrene and the condition was not progressive. There are no trophic changes near the toes and nothing to suggest the ingestion of ergot.

The fibrous constrictions of ainhum did not occur, the affection is widespread, and bony disease extends to the 4th metatarsal. Leprosy is rendered unlikely by the facts that neurological changes, thickening of peripheral nerves and skin lesions were absent, and *M. leprae* could not be found in nasal scrapings. There were no signs suggesting tabes dorsalis or peripheral neuritis.

The other bony lesions in the feet are thought to be congenital in origin, especially as the patient denied any history of significant trauma to the right foot, or any period when he suffered pain over the lateral metatarsals. The unequivocal history, which was confirmed in 1950 excludes a developmental cause for the absence of the toes.

Comparison of the external appearances of the feet with the X-rays shows that the bony loss is greater than that of soft tissue. The radiographic appearances are not those of a chronic inflammation but show pure osteolysis.

The hyperglobulinaemia is felt to be associated with cirrhosis of the liver; he was malnourished and a steady drinker, with hepatomegaly and mild pellagrinous changes in the skin of the arms and dorsa of the feet. Sarcoidosis has not been described as causing bone destruction of this type, nor were there other signs of that disease.

Gorham *et al.*<sup>1</sup> report 2 cases of massive osteolysis, in one of whom they performed an autopsy. In this condition there is spontaneous and unexplained reabsorption of a wide variety of bones, both flat and long, singly or in combination. The clavicle and scapula are most often affected. There is slow destruction of both cortical and cancellous elements; if this is complete, all that remains is a fibrous band which is most probably the periosteum.

In addition to their 2 cases, Gorham *et al.* present summaries of reports of 16 other cases, the earliest being by J. V. S. Jackson in the United States in 1838. Males and females are equally represented in this series, most of the patients being children or adolescents. Our patient was 30 years old when he noticed his toes disappearing. Gorham *et al.* discount trauma as a possible cause and feel that it is an incidental initial complaint when it occurs, unlike the position in Sudeck's atrophy. They are of the opinion that haemangiomatosis has been found sufficiently often in massive osteolysis to be a possible aetiological factor.

That the condition is not necessarily progressive is indicated by Simpson's patient<sup>2</sup>. In 1926 a 16-year-old girl slipped and injured her left foot, not very severely, and there was no evidence of bony disease then. An X-ray taken a year later was quite normal, but 22 months after the injury the foot became painful and an X-ray showed decalcification in the navicular, cuneiforms and lateral three metatarsals. The process was progressive until 1933, when it was found that the affected metatarsals



phalanx of the right 4th toe remain; on the left the whole of the lateral two toes have lost their phalanges, and in the 4th even the distal part of the metatarsal has disappeared. These lesions consist of erosion with no real evidence of reaction. In addition, there is fusion of the cuneiforms and synostosis of the 4th and 5th metatarsals on the right.

Further investigations included the blood Wassermann reaction (negative), serum proteins (albumin 5.3 g. %, globulin 3.7 g. %) and lumbar puncture (normal cerebrospinal fluid with negative serology). Nasal scrapings on this admission and, according to Dr. Prisman, 5 years ago did not show *M. leprae*.

#### DISCUSSION

On the history, one can exclude trauma and frost bite as the cause of the loss of the toes; moreover, the random distribution of the lesions and the absence of scarring of the ends of the digits are against this. Peripheral vascular

had almost disappeared. There was no further change noted in 1936, when the foot was sufficiently stable for the patient to be able to dance. In 1953 Simpson reported to Gorham *et al.* that the patient was in good health and able to walk and cycle.

In the absence of evidence of an alternative cause it seems reasonable to label the present patient as a case of 'disappearing bone' disease. However, there is no evidence that massive osteolysis is a separate entity of clear pathology; it is more than likely that these cases represent a form of response to a variety of stimuli that are not at present understood.

## SUMMARY

A case of spontaneous bilateral disappearance of toes and underlying bones, without obvious cause, is presented, and the picture in similar cases is discussed.

I am grateful to Dr. A. Landau for assistance with the preparation of the paper and for permission to publish the case, and to Dr. W. P. U. Jackson for his advice. Mr. B. Todt kindly photographed the patient and reproduced the X-ray.

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## PLATTELANDSE VERPLEGINGSDIENSTE

H. P. BOTHA, M.B., Ch.B.

*Koffiefontein, O.V.S.*

Die bespreking gaan oor blanke verplegingsdienste op die platteland, buite en onafhanklik van gesubsidiëerde hospitale. In die praktyk het hierdie dienste aanvanklik net uit tuisverpleging bestaan. Maar mettertyd brei dit ook uit tot kraaminrigting-verpleging. Weens die verwantskap met Provinsiale hospitaalbeleid, het hierdie ontleding slegs te doen met die Oranje-Vrystaat.

*Doel van die Onderwerp.* Die Gesondheidsdepartement beheer die plattelandse verplegingsdienste wat buite en onafhanklik van die Provinsiale hospitale gedoen word. Distriksverpleging is die stelsel wat dit vir plaaslike owerhede of liefdadigheidsorganisasies moontlik maak om 'n verpleegster aan te stel, omdat die Gesondheidsdepartement tans sewe-agstes van haar salaris terugbetaal.

Die onderwerp se doel is om hierdie plattelandse verplegingsdiens te ondersoek in die lig van mediese getuienis deur algemene praktisyns wat van hospitale beskore is. Dit berus op vraelyste wat uitgestuur is onder beskerming van die Mediese Vereniging Takraad, nadat 'n dooiepunt gelei het tot die kwyning of sluiting van die klein kraam-verpleeginrigtings. Die feite kry dadelik meer betekenis as gelet word op die ontwikkelingsstadia in die voorsiening van verpleegsters vir afgeleë gebiede.

## ONTWIKKELING VAN PLATTELANDSE VERPLEGINGSDIENSTE

Bevallings op eensame plase, oorgelaat in die hande van primitiewe kleurlingvroue, was een rede vir die hoë sterftesyfer onder die vroue van die Kaapse koloniste. Die 'Ou-vrou' het ook gekom, en gegaan, toe sy mettertyd plek moes maak vir die distriksverpleegster. 'n Laaste blyk van waardering teenoor hierdie ou garde behoort nie onvanpas te wees nie.

Die distriksverpleegster het op die platteland 'n onmisbare hulp geword. Verbeterde verpleging het bygedra tot die vermindering in moedersterftes. Dit is daarom dat die sterftesyfer vir vroue<sup>1</sup> wat lewende babas

in die wêreld gebring het, en wat as volg vergelyk, deels die verbetering te danke het aan die diens:

1921: 4·9 per 1,000.  
1948: 1·5 per 1,000.

Die beskikbaarstelling van gesubsidiëerde verpleegsters in ylbewoonde gebiede is nou verbind met die naam van wyle dr. Karl Bremer. In 1930<sup>2</sup> laat hy hom as volg uit:

'The question of supplying properly trained nurses to sparsely-populated areas is one bustling with difficulties, but also one which should be grappled with. The untrained nurse has done service for generations, and she will not melt like the snow at the advent of the trained nurse. It has, however, been shown that where a trained nurse establishes herself, and is willing to stay, she will generally succeed. The trained nurse in these areas should be supported through the local authority by the state . . .'

Verdere pleidooie volg in die Volksraad in daardie tyd, en ook op 'n Volkskongres te Kimberley in 1934 word daar gepleit vir verbeterde verplegingsdienste op die platteland.

In 1935 dien wyle min. J. H. Hofmeyr toe wetgewing in wat voorsiening maak vir die terugbetaling van een-derde van die distriksverpleegster se salaris. Latere amendemente van hierdie wetgewing het steeds vir groter terugbetalings gesorg, sodat daar vandag baie min geverg word van 'n liefdadigheidsorganisasie of plaaslike owerheid om so 'n diens in te stel. Die volgende vergroting van terugbetalings sal eintlik die begin van 'n staatsverplegingsdiens beteken. Hiervoor was reeds gepleit in die dertigerjare. Baie het gevoel dat die stelsel van distriksverpleging nie net moet afhang van die geesdrif wat daar in 'n bepaalde gemeenskap vir liefdadigheid bestaan nie. Daarom het die departementele komitee van Ondersoek na Nasionale Gesondheidsversekering<sup>3</sup> in 1936 die volgende bevindings gemaak:

1. Dat die platteland strek oor 460,000 vk. myl en dat hierdie gebied yl bevolk word deur 700,000 blankes en



twee-en-'n-kwart miljoen nieblankes. Klem word geleë op die dringende mediese behoeftes van die gebied.

2. Van die gesubsidiëerde verpleegsters sê hulle die volgende: 'Wat ons nou het is uitstekend, maar dit is gruwelik ontoereikend, en dit moet meer uitgebrei en vergroot word.' Hulle het aanbeveel dat 'n staatsverplegingsdiens die plek moet inneem van die 242 gedeeltelik gesubsidiëerde verpleegsters.

3. 'n Som geld behoort aan 'n vrou wat 'n bevalling tegemoet gaan, betaal te word.

In 1952 dien dr. Karl Bremer die Volksgesondheidswet Nr. 44 in.<sup>4</sup> Hiervolgens word voorsiening gemaak vir die terugbetaling tot sewe-agstes van die verpleegster se salaris, wanneer die Minister oortuig is dat in een of ander gebied 'n verplegingsdiens of 'n verloskundige diens buite 'n hospitaal nodig is . . . (Artikel 14.) En die voorafgaande Artikel maak weer voorsiening vir die Provinsiale Administrasie vir die instelling en instandhouding van verplegings- of verloskundige dienste buite maar in verband met Provinsiale hospitale.<sup>5</sup>

In hoeverre voldoen hierdie stelsel van distriksverpleegsters, aan die vooraand van 'n staatsverplegingsdiens, aan die praktiese eise van die veranderlike toestande van die platteland? Verskeie algemene praktisyns gee hierop 'n taamlik eenvormige antwoord. Dit kan dadelik gesê word dat daar nog algemene praktisyns is wat nie oor die dienste van 'n distriksverpleegster beskik nie, omdat daar nog nie genoeg geesdrif of vermoë by enige plaaslike liggaam bestaan nie.

Vir die meeste dorpe weer, was dit die kry en hou van die regte verpleegster wat die diens se uitbreiding gestrem het. Maar aangesien dit 'n deelydse werk in die praktyk is, word die werk nou bv. dikwels gedoen deur eertydse kraamverpleegsters wat in die area woon.

Sekere faktore het die aard en die omvang van die distriksverpleegster se werk laat verander:

1. Vryer hospitalisasie elimineer die verpleging van die meer ernstige geval tuis.

2. Die lang bedverpleging word deur moderne metodes uitgeskakel.

3. Die tekort aan medici op die platteland is ook grootliks uitgewis, en dus doen die pasiënt se huisdokter baie van die tuisbehandeling self.

#### KRAAMVERPLEGINGSDIENS

Dit kan dus nie betwis word nie dat *die verpleging van kraamgevalle* die belangrikste deel van die distriksverpleegster se werk geword het. Die kennis daarvan is ook die groot vereiste vir die plattelandse verpleegster. Die afgeleë plase, oorvleueling van dorps- en distriksgevalle—sosiale omstandighede wat die tuisbevalling onwenslik maak—is almal dinge wat gelei het tot oprigting van kraaminrigtings. Hier kon die meeste van die bevallings van dorp en distrik gedoen en verder versorg word deur die distriksverpleegster, wat as kraamsuster ook inwonend was.

Van owerheidsweë is op twee wyse hulp ontvang: 1. Sewe-agstes van die verpleegster se salaris is deur die Gesondheidsdepartement terugbetaal.

2. Die Provinsiale Administrasie het 'n subsidie van £8 10s. per behoeftige kraamgeval uitbetaal.

Deur publieke bydraes is die kraamwerk van dorp

en distrik so gesentraliseer in 'n verpleeginrigting, wat oor 'n paar beddens beskik. Die meeste komplikasies kon daar behandel word, tensy snykundige behandeling nodig was. Van 1 tot 4 vroue is gemiddeld per maand opgeneem. Daardie vroue wat wel verkies het om tuis die bevalling te hê, is deur die distriksverpleegster of deur een of ander private verpleegster gedien. Oorvleueling het minder voorgekom omdat die distriksverpleegster se werk meer gekonsentreer was. Die plaasmoeder het verkies om na die dorp te kom vir haar bevalling. Vir haar was die inrigting 'n welkome substituuat vir tweederangse dorps- en selfs hotelkamers.

Onder heersende omstandighede het dit die beste stelsel geblyk vir kraamverplegingsdiens op die platteland. En op sekere plekke sou binnekort hierdie diens ook uitgebrei word na die nieblankes.

Die Gesondheidsdepartement het egter intussen beslis dat die sewe-agstes terugbetaling nie kan gedoen word nie as die distriksverpleegster verbonde is aan enige hospitaal, verpleeginrigting of kliniek. Dit het beteken dat die volle verpleegster-salaris moes kom uit 'n verpleeginrigting wat in maande miskien net 1 pasiënt gehad het. Hierdie finansiële faktor het die geesdrif laat kwyn en daarmee het gepaard gegaan die verdwyning van 'n aantal broodnodige kraambeddens. Die fout word gesoek by ons verdeelde Gesondheidsbeheer. Dit kan die rede wees waarom die verantwoordelikheid vir hierdie plattelandse verpleeginrigtings nie aanvaar word nie, nóg deur die Gesondheidsdepartement nóg deur die Provinsiale Administrasie. Die uitbreiding van plattelandse verplegingsdienste word op die oomblik gestrem deur die sielkundige uitwerking wat die sluiting van hierdie verpleeginrigtings tot gevolg het.

Hier sou 'n verwysing na 'n onlangse artikel deur prof. James T. Louw<sup>6</sup> wat in dié verband die toestande van ons land baie kernagtig opsom, paslik wees. Volgens hom word die meeste bevallings in ons land gedoen deur algemene praktisyns en vroedvroue. Verder laat hy hom as volg uit:

'The maternity services (and well over 60% of Gynaecology depends upon Obstetrics) of our land have not kept pace with the good that modern medicine has to offer. There is as yet no planned maternity service like that found in the United Kingdom, Canada, Australia and New Zealand.'

Die tot niet gaan van 'n paar minderbelangrike plattelandse kraaminrigtings dui beslis daarop dat daar nog nie 'n beplande kraamdiens-stelsel in ons land is nie. Daarom dat dr. Karl Bremer<sup>6</sup> reeds in 1930 vir gesondheidsseenheid gepleit het:

'As Volksgesondheid onder een gesag was, dan sou daar vir gewone siektes, vir aansteeklike siektes en ook vir kraaminrigtings voorsiening gemaak gewees het. Maar omdat daar vandag die verdeelde beheer bestaan is dit alles onmoontlik.'

Eenvormigheid en gelyke verantwoordelikheid vir al die vorme van plattelandse verplegingsdiens makeer dus nog op die oomblik. En as kraambed-voorsiening ook miskien nog nie tot sy reg gekom het in die Provinsiale hospitale nie, kan net kortliks gelet word op toestande elders, veral omdat daar vir 'n eenvormige diens vir ons land gepleit word. Die Gluckman-rapport vermeld ook: 'A sad shortage of midwifery hospitals'.<sup>7</sup>

Tydens die 14de Britse Kongres van Obstetrie en Ginekologie van 1955,<sup>8</sup> het die bespreking daar heelwat lig gewerp op die rol wat gespeel word deur die vroedvrou, die huisdokter en die spesialis tydens die normale bevalling. Die vergelyking tussen Britse en Amerikaanse stelsels lewer stof tot nadenke, en sekere gevolgtrekkings gemaak mag feite van belang word in ons eie ontwikkeling. Prof. John L. McKelvey (Minneapolis, V.S.A.) bring die volgende aan die lig oor kraamdienste aldaar:

1. Vroedvroue het feitlik verdwyn van die toneel in die V.S.A. en Kanada.

2. Daar kan nie voorspel word nie watter vrou 'n normale bevalling sal hê, en watter een nie.

3. In die V.S.A. word die meeste verloskunde gedoen deur die gesin se huisdokter in goed-toegeruste inrigtings wat oor hoogsgekwalfiseerde personeel beskik. Daar is ook noue kontak met vertroude spesialiste.

Die Britse gegewens is verskillend en interessant:

1. Ongeveer 60% van bevallings in Brittanje geskied in hospitale en vroedvroue doen 80% van alle bevallings.

2. Die algemene praktisyn van Brittanje maak nie 'n belangrike skakel van die diens uit nie, en daar is min kontak met sy kraamgeval as sy eers opgeneem is in die hospitaal.

'n Groot getal bevallings word tuis gedoen in die digbewoonde gebiede in Brittanje. Dit word veral moontlik gemaak deur die mobiele 'hospitaal' wat enige noodgeval in die distrik binne minute kan bereik. En dit is sekerlik 'n belangrike voorwaarde vir die tuisbevalling. Selfs deskundiges vind dit onmoontlik om gedurende die voorgeboortelike periode enige abnormale teite te voorsien, soos bv. post-partum bloeding, agterblywende placenta, kraambedkoors of storing van die uterus-kontraksies.

Ons land se geografiese omstandighede maak dit nodig dat baie faktore in ag geneem moet word, eer 'n verwagte vrou sonder meer verwys word na haar huis.

#### GEVOLGTREKKINGS

1. Die Gesondheidsdepartement bly blykbaar intussen verantwoordelik vir verplegingsdienste buite en onafhanklik van gesubsidieerde Provinsiale hospitale op die platteland. Die moontlikste oplossing van die dooie punt lê voor die hand: (a) 'n Staats-kraamverpleegster met haar hoofkwartier in die kraam-verpleeginrigting. (b) 'n Staats-distriksverpleegster wat die ideale sal moet verwesenlik wat tans gestel word vir die huidige distriks-

verpleegster, en wat neerkom op 'n mengsel van verpleging en maatskaplike werk.

2. Enige beleid wat sal mik op sentralisasie van kraamdienste deur die uitskakeling van hierdie klein kraaminrigtings en vervanging van 'n eie dokter en verpleegster, verloor 2 gesigspunte uit die oog: (a) Die keuse van dokter en verpleegster is 'n vrou se besondere voorreg. (b) Daar word nie rekening gehou met die ekonomiese laste wat so 'n beleid van sentralisasie sal verg van die middel inkomstegroep nie. Vergelyk dit met die posisie van die gewone nie-blanke vrou. Die distriksgeneesheer besoek haar tydens die bevalling, en kostelose vervoer na die hospitaal word voorsien, mits komplikasies intree.

3. Kraamverpleging stel tans die swaarste eise aan distriksverpleging, en ontwikkeling daarvan sal eerstens moet streef na die welvaart van die moeder.

#### SUMMARY

1. Certain facts regarding district nursing are made available by a questionnaire which was sent to several medical practitioners in the rural areas of the Orange Free State.

2. The part that district nursing plays in the maternity services of rural areas, is discussed.

3. An analysis is made of the present system which led to the closing of several maternity homes.

4. Our own system is compared with maternity services elsewhere, in an endeavour to throw more light on this basic problem of health.

Ek wens graag die kollegas te bedank wat bygedra het tot die versameling van gegewens insake hierdie aangeleentheid.

Uittreksels uit Gesondheidsversekerings Verslag en Hansard, gereproduseer ingevolge die Staatsdrukker se Outeursregvergunning nr. 2253 van 22 September 1955.

#### VERWYSINGS

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2. Bremer, K. (1930): *S. Afr. T. Geneesk.*, 4, 337.
3. Staatskoerant, 41/1936.
4. Volksgesondheidswette gereproduseer ingevolge die Staatsdrukker se Outeursregvergunning nr. 2228 van 15 Julie 1955.
5. Louw, J. T. (1955): *S. Afr. T. Geneesk.*, 29, 441.
6. Bremer, K. (1930): *Hansard*, Deel 15, kolom 3749.
7. Luke, F. R. (1955): *S. Afr. T. Geneesk.*, 29, 51.
8. *Report of the 14th British Congress of Obstetrics and Gynaecology*: *Brit. Med. J.* (1955): 2, 431.

### AWARDS FOR DISTINGUISHED SERVICE ANNOUNCED AT THE MEDICAL CONGRESS

At the opening ceremony of the Medical Congress held in Pretoria, 17-22 October 1955, awards for distinguished service to the medical profession were made. These as announced in the *Journal* on 29 October, p. 1035) were as follows: The Association's Gold Medal to the late Dr. Karl Bremer (received by Mrs. Bremer) and to Dr.

L. I. Braun; the Association's Bronze Medal to Dr. D. P. Marais, Prof. S. F. Oosthuizen and Prof. L. J. te Groen; the Certificate of Emeritus Membership to Dr. J. H. Harvey Pirie and the Certificate of Honorary Membership to Dr. R. V. Bird and Miss C. Nothard. The citations are given below:

#### DR. KARL BREMER

The late Dr. Karl Bremer received his early education at Wellington, later proceeding to the Victoria College, Stellenbosch, where he received the degree of Bachelor of Arts with honours in botany, for which he was awarded a Queen Victoria Bursary. He pro-

ceeded overseas and for a short while studied anatomy and physiology at Cornell University in the United States.

He entered St. Bartholomew's Hospital to study medicine in 1904 and received the degrees of M.B., B.S. of London University

in 1909. In addition to medical and surgical housemanships his interest in children led him to take an appointment at the Great Ormond Street Hospital for Sick Children.

On his return to South Africa he entered general practice in Cradock, Cape. In response to the appeal of General Botha for doctors to serve during the First World War, he joined the South African Medical Corps in 1915 and served as a Captain for the duration of that war. Following this he was appointed as the first Medical Inspector of Schools in the Cape Province, doing much pioneer work in this field. After assisting in Cape Town during the influenza epidemic in 1918, he settled in general practice in Graaff Reinet.

On two occasions during the following 12 years he went overseas for further study, particularly in ear, nose and throat work, and he practised as a specialist in this field in Cape Town from 1931 until 1947, when he retired from active medical practice on account of ill-health.

While at Graaff Reinet the late Dr. Bremer became interested in politics and was elected as a member of the Provincial Council for the Graaff Reinet constituency in 1920. In 1924 he was elected to Parliament for the same constituency. He resigned his seat during the following year as he found that the work interfered with his practice of medicine, but was prevailed upon to contest the seat again in 1929, when he was once more elected. He remained the member for this constituency until 1943 when he contested and won the Stellenbosch seat.

After a period of ill-health, during which he retired from politics, he returned to become a Senator, and in 1951 on the death of the

late Dr. A. J. Stals he was asked to enter the Cabinet as Minister of Health and Social Welfare. Shortly after this he was re-elected to Parliament to represent the Ceres constituency, and later contested and won the Vasco seat.

Dr. Bremer took an active part in the affairs of the Medical Association of South Africa, and while in practice at Graaff Reinet he became President of the Cape Eastern Branch of the Association; in 1937 he was President of the Cape Western Branch. He was a member of the Federal Council of the Association from 1932 to 1939, serving for a time as its Vice-Chairman.

In 1935 Dr. Bremer was appointed by the Minister of Health to represent the Union Government on the South African Medical Council, and in 1943 he was elected President of that Council, a position which he held for 7 years with great distinction, until he resigned on becoming Minister of Health in 1951.

From 1928 to 1945 Dr. Bremer was Chairman of the Council of Public Health, appointed under the Public Health Act of 1919. He served on many committees and commissions dealing with health matters, notably one on medical education. Many younger doctors will remember him as a lecturer at the University of Cape Town on Methods of General Practice, a post which he held for more than 10 years. Among the honours which he received were two honorary degrees—an M.D. from the University of Pretoria and an LL.D. from the University of the Witwatersrand.

The Medical Association is proud to have numbered Dr. Karl Bremer amongst its members and seeks to honour his memory by the presentation of the Association's Gold Medal for distinguished service to the profession.

#### DR. LOSWEL ISRAEL BRAUDE BRAUN

Loswel Israel Braude Braun received his early education at the South African College, Cape Town, and then proceeded to St. Bartholomew's Hospital, London, where he qualified and received the Conjoint Diploma of the Royal Colleges in 1917. He joined the Royal Army Medical Corps and saw service in Mesopotamia and India. While attached to a field ambulance on the north-west frontier of India, he was mentioned in despatches.

At the end of World War I he returned to London and received the degree of M.D. of the University of London in 1921. In the same year he became a Member of the Royal College of Physicians of London, and was elected Fellow in 1939. Between the wars, Dr. Braun served as a physician in Johannesburg and has been intimately connected from its infancy with the growth and development of the Medical School of the University of the Witwatersrand. For many years he served as Clinical Lecturer and later was Senior Clinical Lecturer in the Department of Medicine.

With the outbreak of hostilities in World War II he left his practice for service in the field, and with the rank of Lieutenant Colonel was placed in charge of a field ambulance and later a casualty clearing station, and subsequently was in command of a military hospital in Egypt. He was promoted to the rank of Colonel, mentioned in despatches and awarded the Order of the British

Empire. After his return from Egypt he was in command of the Baragwanath Military Hospital.

Throughout his professional life Dr. Braun has taken a leading part in the corporate life of the profession. For many years he has been a member of the Council of the Southern Transvaal Branch of the Medical Association of South Africa. He was its President in 1940 and later in 1946, and served as a member of the Federal Council between 1936 and 1954. In 1951 he was elected to be Vice-Chairman of the Federal Council and President-Elect of the Association. In 1952 he was installed as President of the Association at the South African Medical Congress, which was held in Johannesburg. At that time the University of the Witwatersrand conferred on him the degree of LL.D.

For a number of years Dr. Braun served as chairman of the Augmented Executive Committee of the Federal Council in the Transvaal, and in this position he was responsible for negotiations with the Transvaal Provincial Council in connection with the Hospitals Ordinance of the Transvaal. In 1948 he was elected to the South African Medical and Dental Council as one of the representatives of his profession.

In recognition of his services, the Medical Association of South Africa seeks to honour Dr. Braun by the award of the Association's Gold Medal for distinguished service to the profession.

#### DR. DAVID PIETER MARAIS

David Pieter Marais was born at Stellenbosch, Cape Province, the son of Professor J. I. Marais, first Chancellor of the University of Stellenbosch. He was educated at the Victoria College, Stellenbosch, and later proceeded to the University of Edinburgh where he graduated M.B., Ch.B. in 1904 and took the degree of M.D. in 1906. After graduation he spent some time on the Continent and in America in postgraduate study.

On his return to South Africa he practised at Worcester, Cape Province, for some years and then settled in general practice at Sea Point. In 1914 he was appointed Additional Physician to the New Somerset Hospital and served continuously on the staff of that hospital and the Groote Schuur Hospital from 1914 to 1945. He was Senior Lecturer in Clinical Medicine in the University of Cape Town from 1921 to 1945. He took the diploma of M.R.C.P. (Edin.) in 1925 and was elected Fellow in 1930. In 1940 he became a Fellow of the American College of Chest Physicians.

In the course of a long and distinguished career in private practice as a specialist physician in Cape Town, Dr. Marais has given generously of his time in the service of his profession, both within and outside the Medical Association. He was Honorary Secretary of the Cape Western Branch from 1913 to 1915 and was

elected President of the Branch in 1921. He was President of the Southern Peninsula Medical Society in 1939 and Chairman of the Cape Town Postgraduate Association in 1949. On several occasions he has been President of the Section of Medicine at the Annual Congresses of the Medical Association, and in 1932 was honoured by being elected Vice-President of the Section of Tuberculosis at the Centenary Meeting of the British Medical Association. From 1951 to 1954 he was Chairman of the Cape Town Group of the Association of Physicians, and at present is the Chairman of the National Group. He has been a member of Federal Council on three occasions, 1926 to 1927, 1933 to 1934, and 1940 to 1945.

He was an original member of the committee appointed by Federal Council to establish the College of Physicians and Surgeons of South Africa, and is a signatory to the Memorandum of Association of the College.

Dr. Marais is perhaps best known for his long and enthusiastic work in the prevention of tuberculosis. He served on the first Public Health Council, Union of South Africa, from 1919 to 1925, and was Chairman of the Association for the Prevention of Consumption from 1913 to 1925. He is now chairman of the



Cape Province Tuberculosis Council, and is a member of the executive of the South African National Tuberculosis Association. In 1947 he was appointed Regent for South Africa of the American College of Chest Physicians.

He is a founder and life member of the Sunshine Homes for Children, Bellville, and Vice-Chairman of the National Christmas Stamp Fund. He has travelled extensively to all parts of the

world as a delegate to international and other congresses dealing with his particular speciality.

In recognition of his valuable services to his profession, his long and faithful membership of the Medical Association, his outstanding qualities as a physician, and the notable part he has played in the campaign against tuberculosis, the Medical Association of South Africa has resolved to award to Dr. Marais the Bronze Medal of the Association.

#### DR. SAREL FRANCOIS OOSTHUIZEN

Sarel Francois Oosthuizen was born in the Orange Free State, where he received his early education. He later went to the University of Cape Town, where he graduated to the degree of M.B., Ch.B. in 1934. In 1939 he was made a Member of the Royal College of Physicians of Edinburgh, and received the D.M.R. of the University of London in 1938. In 1942 he received the degree of M.D. of the University of Cape Town, and in 1948 was elected to be a Fellow of the Royal College of Physicians of Edinburgh.

In 1950 he was honoured by having conferred on him the F.F.R. and subsequently was made a Fellow of the American College of Radiologists. In 1943 he was appointed to the Chair of Radiology at the University of Pretoria and at the same time was appointed to be Chief Radiologist of the Pretoria Hospital. He has been Adviser in Radiology of the Transvaal Provincial Administration for a number of years. In 1949 he was nominated by the Minister

of Health to be a member of the South African Medical and Dental Council and was elected to be its President in 1951. He continues to hold this post.

Professor Oosthuizen became a member of the Association when he graduated, and at one time served on the Branch Council of the Northern Transvaal Branch. He also represented this branch on Federal Council. He has served on the Council for Scientific and Industrial Research for a number of years and is the Honorary Adviser in Medical Research to this Council. He has been appointed as a member of a number of committees and commissions dealing with investigations into research and other health matters.

The Medical Association of South Africa is glad to recognize the worth and service of Prof. Oosthuizen by the award of the Association's Bronze Medal for meritorious service.

#### DR. LUTHERUS JOHANNES TE GROEN

Lutherus Johannes te Groen received his early education in Pretoria and later proceeded to Holland, where he received the Arts Medicine degree in 1916. He returned to Pretoria in 1920, where he started in general practice. In 1921 he was appointed as Honorary Obstetrician at the Moedersbond Hospital, and in 1928 was appointed as Honorary Surgeon on the staff of the Pretoria Hospital. He held this post until 1935.

In 1936 he started practice as a specialist in gynaecology and obstetrics in Pretoria. In 1943 he was appointed Professor of Gynaecology and Obstetrics at the University of Pretoria, and in the same year was appointed Dean of the Faculty of Medicine, which position he still holds. In 1947 he was appointed as Honorary Gynaecologist and Obstetrician to the Queen and Her House-

hold during the Royal visit to this country. In 1944 he became a member of the South African Medical Council and in 1951 a member of the South African Nursing Council. He has been Honorary Treasurer of the Medical Council for a number of years.

He was honoured in 1953 by the conferment on him of the Fellowship of the Royal College of Obstetricians and Gynaecologists.

He has been a member of the Medical Association since 1920 and held the post of secretary and president of the Northern Transvaal Branch of the Medical Association. He also represented the branch on Federal Council.

The Medical Association of South Africa appreciates the person and service of Prof. te Groen, and awards to him the Association's Bronze Medal for meritorious service.

#### DR. JAMES HUNTER HARVEY PIRIE

James Hunter Harvey Pirie, after obtaining the degree of Bachelor of Science, proceeded to the study of medicine and graduated as a Bachelor of Medicine and Bachelor of Surgery of the University of Edinburgh in 1902. Five years later he became a Doctor of Medicine of that University, and in 1910 he was elected a Fellow of the Royal College of Physicians of Edinburgh and later a Fellow of the Royal Society of Edinburgh.

It is just 7 years ago that the Medical Association of South Africa honoured Dr. Pirie by the award of the Association's Gold Medal for distinguished service to the medical profession. The presentation of that medal was made in this hall at the Opening ceremony of the Congress which was held in Pretoria in 1948. At that time the following words were spoken in regard to Dr. Pirie:

'The Association's Gold Medal is conferred upon a member of the medical profession for various reasons: sometimes because of the man himself, sometimes because of his contributions to the advancement of the science of medicine, and sometimes because of his contributions to the welfare of the members of the Medical Association. It is difficult to start to recapitulate the qualifications which Dr. Pirie presents. As a man, his early experience in the work which was his first love, namely geology, contributed to the qualities which have stood the profession in great stead during the periods of stress and strain. He was one of the earliest Antarctic explorers and his experiences with his colleagues there with regard to the understanding of human nature stood us in good stead.

'He came to South Africa to the staff of the South African Institute for Medical Research in 1916 after he had served in the armed forces as a medical officer in East Africa. From his earliest days he has taken great interest in medical conditions in the country and, during his period of service as Superintendent of the Institute for Medical Research, he made contributions to the

study of diseases peculiar to South Africa. Subsequently, when appointed Research Officer to the Institute, he made very considerable advances in our knowledge of plague in this country and also of tuberculosis.

'From his earliest days in Johannesburg Dr. Pirie has taken a great interest in the Medical Association and has identified himself with all the difficulties which have faced the members of the profession throughout the long period. The members of the Association have recognized his interest and his ability by electing him as President, and he has the record of 7 years' service in the presidential chair of the Federal Council. One would have thought that, after his retirement from active medical work, he would have been justified in gradually giving up these activities, but it has been the experience of the Association that, in the difficulties which have been presented to it in the last few years, it has always been to Pirie that appeal has been made to guide the Association's representatives to all the powers-that-be with which our difficulties were concerned.

'His work outside the medical profession on behalf of the distressed peoples has been recognized by the Soviet Union, and by his being mentioned to the King for his activities, particularly in regard to the Red Cross.

'In these respects Pirie has shown himself an outstanding man, and the Association honours itself by conferring upon him the Gold Medal.'

During the last 7 years Dr. Pirie has continued to serve the Association as a member of the Augmented Executive Committee of the Transvaal and in taking his place with great regularity at meetings of Federal Council in the *ex officio* position of Past Chairman of Council.

Once again the Medical Association of South Africa honours Dr. Pirie by awarding him Emeritus Membership of the Association.

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## DR. ROBERT VINCENT BIRD

Robert Vincent Bird was born in the Orange Free State. He received his early schooling at the South African College School, Cape Town, and then proceeded to the United States of America, where he obtained the degree of D.D.S. at the University of Michigan in 1918. He returned to South Africa in 1919 and commenced practice in Pretoria.

Dr. Bird was a foundation member of the Pretoria Dental Society, served for some time as its Secretary, and was elected President in 1928. The same year he was elected President of the Dental Association of South Africa, which office he held until his resignation in 1944.

From 1931 to 1936 he served as honorary Visiting Dental Surgeon to the Pretoria General Hospital. In 1929 he became a member of the Pretoria Dental Clinical Board and in 1931 was elected as Chairman of this Board. In 1938 he became President of the Pretoria Rotary Club and was also appointed to the Visiting Staff of the Military Hospital at Voortrekkerhoogte. During the last war, Dr. Bird was Director of Dental Services to the South African Forces.

In 1934 he was elected member for the Transvaal of the South African Medical and Dental Council and has continued to be a member of this Council. In 1949 he was elected its Vice-President and still holds that office. This is the first time this honour has fallen to a dentist. In 1948 the Queen of the Netherlands honoured him by creating him an Officer of the Order of Orange Nassau.

In 1938 Dr. Bird was accorded Honorary Membership of the British Dental Association and was elected a Fellow of the International College of Dentists and of the Odontological Society of South Africa. In 1932 he was honoured by the University of the Witwatersrand who conferred on him an Honorary Degree of Doctor of Laws.

Dr. Bird is a part-time lecturer in the Faculty of Dentistry at the University of Pretoria, his subjects being Dental Ethics and Jurisprudence.

The Medical Association of South Africa recognizes the sterling qualities of this eminent man and has elected him to its small but select band of Honorary Members.

## MISS CONSTANCE A. NOTHARD

Miss Constance Nothard was born in the Cape Province and educated at Grahamstown. She completed her training as a nurse at Pretoria Hospital in 1915 and served for the remainder of World War I as a Sister in France with the South African Military Nursing Service. From 1919 to 1929 she held a Sister's post at Pretoria Hospital. For the next 10 years she was Matron of the Addington Hospital in Durban, during the latter 5 years of which she acted as part-time Matron-in-Chief of the South African Military Nursing Service.

During the whole of the period of World War II she was full-time Matron-in-Chief of the South African Military Nursing Service, with the rank of Colonel. During the first World War she was awarded the *Croix de Récompense* and twice mentioned in despatches. During the second World War she was awarded the Royal Red Cross. As will be seen, she has devoted her whole life to nursing and the allied services and is highly esteemed by both the nursing and medical professions.

Miss Nothard is an active member of the Trained Nurses' Association and has served as a committee member and chairman of branches and later as a member of the Central Governing

Board for 7 years. She took an active part in the passing of the Nursing Act in 1944 and has been Chairman of the South African Nursing Council for a number of years. She has also been a member of the Board of the South African Nursing Association for the past 11 years.

Miss Nothard has represented the nurses on the South African Medical and Dental Council from 1939 onwards and has served on the Executive Committee of that Council since 1944. She represented the South African Nursing Association at the Congress of the International Council of Nurses in 1947, and served on the Committee on Nursing Education and Constitution and By-Laws Committee of the International Council of Nurses. She has also been a member of the National Health Council since its inception and has served on its Standing Committee. Miss Nothard served on the Government Villages Board after the second World War and is a Vice-President of the South African National Council for Cancer Research. She has also served on the Nursing Council of the British Protectorates.

The Medical Association of South Africa recognizes the outstanding ability of Miss Nothard and has elected her to be the first woman to be entered on its list of Honorary Members.

## BENEVOLENT FUND : DIE LIEFDADIGHEIDSFONDS

The following contributions to the Benevolent Fund during August and September 1955 are gratefully acknowledged.

## Votive Cards in Memory of:

Dr. T. Lindsay Sandes by Dr. F. W. F. Purcell, Dr. Hamilton Dyke, Dr. A. Simpson Wells, Dr. and Mrs. P. C. W. Madden, Dr. C. L. and Miss M. Darley-Hartley.

Mrs. Esther Clarke by Dr. M. Meyers.

Mr. L. B. Goldschmidt by Dr. and Mrs. J. S. du Toit, Dr. and Mrs. A. H. Tonkin, Dr. and Mrs. F. O. Fehrsen, Dr. and Mrs. D. P. Marais, Dr. and Mrs. A. W. Sichel, Dr. and Mrs. J. C. Gie, Dr. A. J. Orenstein, Dr. F. Sutton Charnock, Dr. R. Schaffer, Dr. J. D. M. Claassens, Dr. E. G. van Hoogstraten, Medical Association of South Africa, Queenstown Division, Dr. B. Porter, Dr. Hamilton Dyke, Dr. and Mrs. Lance Impey, Dr. and Mrs. C. M. Grundlingh, Drs. Meyer, Jacobson and Van der Burgh, Dr. A. J. Helfet, Dr. Raymund Theron, Mr. J. A. Currie, Dr. L. I. Braun.

Mrs. J. W. Parkinson by Dr. L. R. Tibbit.

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Dr. J. F. Wicht by Dr. and Mrs. D. P. Marais, Dr. J. S. Smit.

Dr. C. G. L. van Dyk by Drs. Welsh, Lawrence and Lloyd-Wrongsley, Dr. and Mrs. A. W. Sichel, Medical Association of South Africa Northern Transvaal Branch, Dr. and Mrs. J. H.

Struthers, Dr. and Mrs. C. M. Grundlingh, Dr. and Mrs. B. Epstein.

Mr. J. L. Wright by Dr. and Mrs. A. W. Sichel.

Dr. R. D. A. Douglas by Dr. B. Porter, Dr. A. Simpson Wells.

Col. J. S. Morton by Dr. C. A. Green.

Mr. P. Chapman by Dr. C. A. Green.

Mrs. Wright, mother of Dr. M. K. Wright by 'The D.P.M. Class'.

Dr. T. P. Oates by Dr. A. W. Sichel, Dr. Alex S. Weir, Cape Midland Branch.

Mrs. Marjorie Collis by Dr. L. I. Braun, Honorary Secretary, East Rand Branch, Dr. G. F. van der Merwe, Southern Transvaal Branch.

Mr. Rory Arnold by Dr. P. W. J. Keet.

Mevr. van Hayningen deur Croeser, Ken en Kinders.

Miss M. E. Foxon by Dr. and Mrs. A. W. Sichel.

Mr. Alex Versfeld by Mr. and Mrs. Ian MacNab, Mr. Sibbald Ball.

Dr. and Mrs. J. Don by Dr. Rose Weinberg.

Mr. A. G. Voigt by the Honorary Medical Staff of the Somerset Hospital.

Mr. Dumas by Dr. J. J. van Zyl.

Mrs. Armitage by Dr. R. B. Peckham, Dr. H. A. Kalley, Dr. A. H. Baxter.

Mrs. A. Goldswain by Dr. A. H. Baxter.

Total amount received from Votive Cards, £109 4s. 6d.

## Services rendered to:

'Anonymous' by Drs. L. Forsyth, A. Mears, Lindsay van der Spuy and Drs. Finlayson and Clegg.  
 Mrs. L. R. Tibbit by Drs. P. Lynch, J. Lynch and J. McNeill.  
 The Children of Dr. H. I. Maister by Drs. E. Colley, L. E. Lane, G. Comay, P. Hafner, Jowell Hooper and Geere.  
 Dr. C. S. Jones by Mrs. L. Roefs.  
 Mrs. R. W. Meumann by Dr. D. F. Standing.  
 Dr. H. Carey-Venis by Two fellow Medical Men.  
 Mrs. Hamilton Dyke by Drs. D. W. Burton, J. K. McCabe, J. M. Marquard and R. J. Melvin.  
 William Antel by Drs. B. van Lingen, Mr. L. Fatti and his surgical team and Dr. B. K. Meaker.  
 Dr. Gladys Beinart by Dr. Patricia Massey.  
 Mrs. Rosin by Dr. R. Schaffer.  
 Miss M. Jooste by Mr. L. Fatti, Mr. Crawshaw and Dr. van Lingen.  
 The late Mr. W. H. Opie by Drs. R. S. Cullis, J. D. Joubert and C. J. B. Muller.

The late Dr. and Mrs. J. Don by Drs. J. Weinberg, Cole and Staff of D 1 Ward Groote Schuur Hospital and others.  
 Mrs. B. Kavalsky by Drs. J. H. Bam and F. N. Charnock.  
 The late Magda van Oostrum by 'Anonymous'.

Total amount received from Services Rendered, £163 7s. 6d.

## DONATIONS

	£	s.	d.
Members of the Cape Western Branch (Collection Box) .. .. .	2	2	0
Members of the Cape Western Branch (Collection Box) .. .. .	3	13	5
Dr. M. R. J. Peters .. .. .	0	10	6
Dr. A. F. Cochrane .. .. .	0	10	6
Dr. D. V. Chetty .. .. .	0	10	6
Dr. A. L. Forbes .. .. .	0	10	6
Dr. C. L. Lauf .. .. .	0	10	6
Total .. .. .	£280	19	11

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## NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

British Drug Houses (South Africa Pty.), Ltd., announce the introduction of *Entacyl Suspension* and supply the following details:

*Entacyl Suspension* is a palatable presentation of piperazine adipate in a liquid medium specially adapted to the needs of infants and young children. The product is complementary to *Entacyl Tablets* which are more convenient for administration to older children and adults. *Entacyl Suspension* contains 300 mg. of piperazine adipate in each half-teaspoonful, is sweet tasting, has a fruit flavour and is rose coloured. It is very readily accepted by children.

**Indications:** *Entacyl* is indicated for the treatment of enterobiasis (threadworm) ascariasis (roundworm) trichuriasis (whipworm) and animal experiments have shown that it may also be of value in ankylostomiasis (hookworm).

**Dosage and Administration:** *Entacyl Suspension* is administered orally as follows: Children up to 6 years of age one half-teaspoonful per day per year of life; children over 6 years of age and adults one teaspoonful 3 times a day.

When used for the eradication of threadworm infestation this dosage should be administered for 7 days. Very occasionally it may be necessary to repeat the course of treatment after an interval of one week. During treatment, the perianal area and perineum should be smeared with ammoniated mercury ointment and the usual hygienic measures taken to avoid re-infestation from hands or clothing. The use of an enema or an aperient with *Entacyl* is not necessary.

Alternatively, a one-day treatment may be employed for the

treatment of roundworm infestation. If this method is adopted, children should be given 750 mg. or 1½ teaspoonfuls of *Suspension* for each year of life. The dose may be given as a single dose or in 3 or 4 divided amounts. For children of 6 years and for adults a total dose of 4.5 gramme or 7½ teaspoonfuls of *Suspension* is found to be adequate.

In cases of roundworm infestation, if it is necessary to repeat the course of treatment, this should be done after an interval of three weeks.

If anaemia, probably hypochromic, is suspected as having resulted from the helminth infestation, it is suggested that treatment of the anaemia should be undertaken when, or even before giving *Entacyl*. This is particularly applicable to ankylostomiasis.

**Packings:** Bottle of 50 ml. Bottle of 225 ml. (approx. 8 fl.-oz.).

1. J. Pharm. Pharmacol., 1954 (October) 6, 718.

2. Lancet, 1954 (March 13), 1, 557.

Maybaker (S.A.) (Pty.) Ltd. announce that *Anthical Lotion* is available in 4 fl. oz. bottles. This antihistamine lotion incorporates mepyramine maleate and zinc oxide, and is of particular value during summer months as a soothing topical application for the treatment of sunburn and prickly heat.

It is effective in insect bites and minor pruritic conditions and when an antihistaminic is indicated in a non-greasy liquid vehicle, *Anthical* may also be used in more severe pruritus and allergic skin disorders.

## PASSING EVENTS : IN DIE VERBYGAAN

A *Clinical Discussion Group* has been formed at Edenvale Hospital, Transvaal. The first meeting will be held on Monday, 7 November, at 8 p.m., and henceforth on the first Monday of every month. **Venue:** 1st Floor, European Section of Edenvale Hospital; **Subject:** Demonstration of interesting clinical cases; All members of the profession are cordially invited to attend.

\* \* \*

Dr. Ariel Goldberg, of Cape Town, has arrived home after a seven months' visit to the United Kingdom and the Continent. Dr. Goldberg represented the Association at the 9th General

Assembly of the World Medical Association in Vienna, and also conveyed a message of greeting on behalf of the Association to the 3rd World Congress of the Medical Association of Israel. He has resumed practice at National Mutual Buildings, Church Square, Cape Town.

\* \* \*

Dr. Corin H. Hodgson of the Mayo Clinic is on a brief visit to South Africa. He expects to be in Cape Town between 2 and 4 November, and will lecture to the College of Chest Physicians on 4 November.

The American College of Chest Physicians is offering three cash awards for the 1956 prize essay contest. The first prize is \$250, the second \$100 and the third \$50. The contest is open to undergraduate medical students throughout the world and essays may

be written on any phase relating to the diagnosis and treatment of chest diseases (heart and/or lungs). The contest closes on 10 April 1956. Applications for further information should be made to the American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois, United States of America.

## BOOK REVIEW : BOEKRESENSIE

### ANXIETY

*The Medical Significance of Anxiety.* By Richard L. Jenkins, M.D. Pp. 46. \$1.00. Washington: The Biological Sciences Foundation Ltd. 1955.

*Contents:* 1. The Need for Control of Anxiety. 2. The Control of Anxiety in Medical Practice. 3. Nature of Anxiety.

Anxiety is the commonest of all psycho-neurotic symptoms, as well as a normal ingredient of everyday life for most citizens in our stressful civilization.

While this booklet is not a profound scientific treatise on anxiety and puts forward no novel views based on original work, it is quite a workmanlike account of the subject on the general-practitioner level, such, for instance, as might be given by a specialist psychiatrist, if invited to address the local medical society.

It is pleasantly set out and easy to read, and covers the ground adequately from the practitioner's point of view. As such an exposition should be, it is also properly didactic in tone, and could be of considerable value to the doctor who, as doctors so often are, is called upon to handle cases with anxiety as a prominent symptom. M.M.

## CORRESPONDENCE : BRIEWERUBRIEK

### 'HANDSOME' ORTHOPAEDIC SURGEONS

*To the Editor:* I have the greatest admiration for general surgeons. I wish however to dispute the facts as stated by Mr. George Sacks in the issue of 8 October 1955. All orthopaedic surgeons are not handsome.

George Dommisie

303 Van Riebeeck Medical Building  
Schoeman Street  
Pretoria  
13 October 1955

### SPECIALIST AND CONSULTANTS' REGISTER

*To the Editor:* I cannot understand why 'Junior Specialist'<sup>1</sup> should be so perturbed over the consequences of the projected Consultants' Register.

In my opinion he has no cause for alarm. The object of the Consultants' Register is to define the position of the specialist. This has nothing to do with the old concept of 'consultant' who in effect does not exist any more. The register will merely remind the specialist that in the first instance it is the general practitioner who should consult him and not the patient. This accounts for the name 'Consultants' Register'.

One of the more important duties of the general practitioner is to ascertain whether a specialist's opinion is necessary and which specialist should be consulted. How can the patient know whether he is really ill and which specialist to go to? What is the use of asserting that the patient has the right of free access to the specialist when he is unable to exercise this right in an intelligent manner?

Once the relationship between specialist, general practitioner and patient has been defined in this way, a new and prosperous era will dawn for the specialist. Instead of having to compete with him, the general practitioner will seek his advice and assistance freely. This will save the patient a lot of time, trouble and money and will re-establish that state of cordiality between specialist and general practitioner, so sadly lacking at the present moment.

Doc Labourer

25 October 1955

1. Junior Practitioner (1955): S. Afr. Med. J., 29, 1020.

### DEATHS FOLLOWING PENICILLIN INJECTIONS

*To the Editor:* The following may be of interest in view of recent reports of deaths following penicillin injection.<sup>1,2,3</sup>

P.D., a Bantu male aged 30 years was admitted to the surgical wards, Coronation Hospital at 12.10 a.m. on 8 August 1955, suffering from paraffin burns involving the face, anterior aspect of neck and upper chest wall, and parts of right leg and forearm. There was no involvement of the oral cavity.

Morphine hydrochloride  $\frac{1}{2}$  gr. was administered and fluid therapy commenced without delay. At 8.30 a.m. his condition was satisfactory and his breathing unimpaired. An intramuscular injection of an aqueous solution of penicillin 500,000 units was given into the right deltoid at 8.35 a.m.

Immediately after, the patient became restless, distressed, cold, clammy, and laboured of breathing, which rapidly progressed to a state of severe 'shock' with complete respiratory obstruction. Artificial respiration which included intratracheal intubation proved of no avail and death ensued in a matter of minutes. At intubation extreme oedema glottidis was noted. At autopsy 'most intense congestion of the respiratory tract' was reported, there being no other significant abnormalities.

The mode of onset and nature of the clinical picture in this case, following as it did immediately after injection in a patient with previously unimpaired breathing, strongly suggest that the cause of death was an anaphylactic reaction following on penicillin in a sensitive or previously sensitized patient. Specific enquiry after previous penicillin therapy was not made in this case so that this important factor is unknown.

In commenting it is noteworthy that reports of deaths following on penicillin injection are on the increase. The first fatal reaction to penicillin was reported in 1946,<sup>4</sup> the second in 1949,<sup>5</sup> followed by further reports in 1952; thus two deaths reported throughout the world during the first 9 years of penicillin therapy. Between March 1952 and January 1953 however, a further 15 deaths following anaphylactic reactions ensuing on penicillin injections could be collected from the literature.<sup>6</sup>

Non-fatal sensitivity reactions to penicillin therapy of varying degrees of severity are of course relatively common, and may occasion grave anxiety. The potential hazards of the indiscriminate use of this valuable drug are thus evident and in a recent survey in this *Journal*<sup>7</sup> appearing since the original writing of this note, the prophylactic measures are very adequately discussed, first place being rightly given to the 'avoidance of possible needless sensitization'.

L. Blumberg

Coronation Hospital  
Johannesburg  
14 October 1955.

1. Smith, J. L. (1955): S. Afr. Med. J., 29, 772.
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